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ABSTRACT

By 1999, Maryland residents will have electronic access to a statewide system of information and resources to enable them to work, study, and enrich their lives. This system has its base in the library community, with connections to state and national resources. The Seymour Plan explains how this access will come about. The first stage will establish a statewide telecommunications network, enabling any library to access Seymour through the equivalent of a local phone call. The second stage builds on this electronic infrastructure, adding access to databases that will help users identify, locate, request, and receive information and materials they need. Seymour is being implemented because current systems have developed as far as they can, given their current software, and because the economic situation makes it imperative to use resources wisely. The availability of the Internet and developments in technology make these advances possible. A component of Seymour will be the "Find a ..." service to help people use the system. Implementation of the telecommunications component will begin in late fiscal year (FY) 1993 and be completed by the end of FY 1995. "Find a ..." services will start in FY 1994 and continue through FY 1998. Education, training, and support services will be developed to ensure the successful implementation and use of Seymour. Individual projects under Seymour are described, and a 34-item glossary is included. (SLD)

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The Seymour Plan

Electronically Connecting Maryland's Libraries

Prepared by
the Seymour Working Group
for the Maryland State Library Network Coordinating Council

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The Seymour Plan

Electronically Connecting Maryland's Libraries

Prepared by:

The Seymour Working Group for the

Maryland State Library Network Coordinating Council

Issued by

The Division of Library Development and Services
Maryland State Department of Education

December, 1992

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Governor, State of Maryland

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Glossary

EXECUTIVE SUMMARY

By 1999, Maryland residents will have electronic access to a statewide system of information and resources to enable them to work, study and enrich their lives. This system has its base in Maryland's library community, with connections to state and national resources.

The Seymour Plan answers the why, how, when, where and who questions of how Maryland's residents will get access to information and materials electronically. The first stage of implementation will establish a statewide telecommunication network, enabling any Maryland library to access Seymour through the equivalent of a local phone call. The second stage builds on this electronic infrastructure, adding access to databases that will help users identify, locate, request and receive the information and materials they need. Seymour's search and retrieval services will begin simply and develop more capabilities over time. Ultimately, Maryland residents will be able to use Seymour in their local library, at home, work or school.

Seymour is being implemented because of these circumstances and opportunities:

- The current statewide resource sharing systems, like MICROCAT and MILNET, have developed as far as they can under their current software. It is time to plan for the state's "next generation" resource sharing system.
- Many Maryland libraries have been converting their catalog records to machine-readable form and bringing up local online systems based on those records. Frequently they contribute the records to MICROCAT/ULPM.
- Because machine-readable records are loaded into local as well as statewide files, there is considerable redundancy of effort and cost. There must be ways to eliminate the duplication of effort, yet enhance access to information.
- The Internet, the nation's "network of networks", is available to Maryland to serve as a link in the telecommunication system.
- Developments in information technologies, particularly those used in linking systems and providing sophisticated searching capabilities, offer many possibilities for enhancing Maryland's resource sharing systems.
- Maryland's economic situation makes it very important to most effectively use its library resources.

Seymour's implementation will begin with the *telecommunication component* which places message routing/managing equipment in strategic geographic locations in the state and connects them through leased telephone lines and the Internet. The result will be an electronic infrastructure, a "highway" connecting libraries and their users.

The second component is Seymour's *Find a ... services*, which will help people identify, locate, determine the availability, and initiate a request to receive the book, article or information they need. The services include Find a Book, Find an Article, Find a Fact, Find a Helping Agency, Find Government & Other Information, and Ask for Help. From a library perspective, these services supersede the current statewide union catalog (MICROCAT/ULPM) and interlibrary loan system (MILNET), developing a more integrated approach to finding and requesting needed materials and information. Seymour will establish links to library online public access catalogs, one or more periodical indexes, specialized information databases, a virtual statewide information and referral file, state and local databases and other resources.

Libraries will need at least dial access capability (microcomputer, modem, telecommunication software and access to a telephone line) to use Seymour's services. Libraries with local automated systems may be able to connect to Seymour through these systems.

Implementation of the telecommunication component will begin in late FY 1993 and be completed by the end of FY 1995. Development of the Find a ... services will start in FY 1994 and continue through FY 1998. Funding sources may include the federal Library Services and Construction Act (LSCA) and National Science Foundation (NSF). Libraries may be asked to share in connection and licensing costs. They will be responsible for the computer equipment used to access Seymour.

Education, training and support services will be developed to ensure the successful implementation and use of Seymour. Governance, policy and procedural issues will be addressed by the State Library Network Coordinating Council, beginning in FY 1993.

In summary, The Seymour Plan describes the creation of an information infrastructure based on new information technologies that will enable Maryland residents to get the information and materials they need. Seymour will be simple to use, and it will provide access to local, state and national electronic resources. It is designed to fulfill the mission of the Maryland State Library Network:

> **The Maryland State Library Network will provide the residents of Maryland with rapid, easy access to information, materials and services from any available information source.**

PREFACE

The Seymour Plan was prepared at the request of the Maryland State Library Network Coordinating Council. In 1991, the Council approved a "Vision Statement" that describes how Maryland residents in the year 2000 will have electronic access to a myriad of resources to meet their information needs. The Council appointed the Seymour Working Group and asked it prepare an implementation plan for making the "Vision Statement" a reality. The Working Group agreed to submit a plan to the Council by the end of September, 1992.

In October, 1992, the Network Coordinating Council, having suggested several changes in the draft, asked that The Seymour Plan be published as a formal document. At the same time it appointed the Seymour Implementors Group and charged them with making Seymour a reality.

The members of the Seymour Working Group were:

Scott Bunn	Charles County Public Schools
Dara Cook	Catonsville Community College
Ron Larsen	University of Maryland, College Park
Joyce Latham	Southern Maryland Regional Library Association
George Sands	Caroline County Public Library
Barbara G. Smith	Maryland Division of Library Development & Services
Pat Wallace	Enoch Pratt Free Library
Michael Walsh	Enoch Pratt Free Library
Claude Walston	College of Library and Information Services, UMCP
Sue Baughman*	Maryland Division of Library Development & Services
Maurice Travillian*	Maryland Division of Library Development & Services

*ex officio

Barbara Smith served as staff to the Group and edited this plan.

The Seymour Working Group wants to thank Richard Rose, telecommunication expert at the University of Maryland, for his excellent help in developing the Network Cloud pieces of this plan.

We would also like to thank the staff of the Provinces Branch of the Anne Arundel County Public Library for making us feel welcome the many days we used their meeting room.

The Seymour Plan

What is Seymour?

First, Seymour is an **electronic infrastructure** that connects Maryland libraries, their users and ultimately any resident of Maryland to information resources within and beyond the state. The infrastructure will have multiple levels of activity:

- A telecommunication backbone will provide libraries with access through a local phone call to a Seymour node (central point) that will in turn connect the user to the libraries and resources available through Seymour. The nodes will be Internet/NREN connections, which will support access and interactivity within the state and beyond its borders.
- Faxing of messages and materials, using electronic mail (e-mail) and participating in bulletin board systems will enhance communication among Maryland libraries and their colleagues across the country.
- Seymour's resource sharing functions (**Find a Book** and similar services, described below) will provide access to bibliographic information about libraries' collections, as well as full text databases and other electronic information resources.
- Freenets and other community resource and information systems will be accessible to all via the Seymour infrastructure.
- The Internet/NREN is accessible through Seymour, enabling users to participate in the national resources available in this "network of networks."

Second, Seymour offers a variety of **access services for resource sharing and information** through an "electronic information mall". Just as a shopper goes to a mall or calls a mail order firm to order a needed item, Seymour enables users to identify, locate, and request what they are looking for. The anticipated services include:

- **Find a Book**
- **Find an Article**
- **Find a Fact**
- **Find a Helping Agency**
- **Find Government and Other Information**
- **Internet/NREN Doorway to National Resources**

Why Seymour? Why now?

Toward the Year 2000: A Strategic Plan for the Maryland State Library Network[1], issued in 1989, recognizes the momentum and possibilities of library information technologies and provides a plan for their progressive implementation statewide. The mission statement included in the plan says that:

> **The Maryland State Library Network will provide the residents of Maryland with rapid, easy access to information, materials, and services from any available information source.**

In 1991, the State Library Network Coordinating Council (NCC) approved its "Vision Statement" of what electronic connection of libraries and information resources will offer Maryland residents by the year 2000.[2] According to the vision, residents will have the ready, simple access the mission statement calls for, and it will be available from home, office, school or library. The NCC sees this as an important goal, and as a result of discussions among Maryland librarians, particularly at the 1991 State Library Network's Participants Meeting, it is also the goal of the greater library community.

There are a number of circumstances and opportunities that make this the right time to implement Seymour:

- The current statewide resource sharing systems, like MICROCAT and MILNET, have developed as far as they can under their current software. It is time to plan for the state's "next generation" resource sharing system.
- Many Maryland libraries have been converting their catalog records to machine-readable form and bringing up local online systems based on those records. Frequently they contribute the records to MICROCAT/ULPM.
- Because machine-readable records are loaded into local as well as statewide files, there is considerable redundancy of effort and cost. There must be ways to eliminate the duplication of effort, yet enhance access to information.
- The Internet, the nation's "network of networks", is available to Maryland to serve as a link in the telecommunication system.

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[1] Toward the Year 2000: A Strategic Plan for the Maryland State Library Network, prepared by the State Library Network Planning and Resource Sharing Task Force. Baltimore, MD, Maryland State Department of Education, Division of Library Development and Services, November, 1989.

[2] "The Maryland Information/Lending System: Electronic Doorways in Maryland Libraries in the Year 2000." Included as Appendix A of this plan.

- Developments in information technologies, particularly those used in linking systems and providing sophisticated searching capabilities, offer many possibilities for enhancing Maryland's resource sharing systems.
- More information becomes available in electronic form each year. Seymour can provide ready access to selected information databases that will help Maryland's residents.
- Maryland's economic situation makes it very important to use its library resources effectively.

With the implementation of the "Vision Statement" as the final goal, and being aware of the current situation in Maryland and the opportunities of information technologies, the NCC appointed a working group[3] in April, 1992, charging it to develop an implementation plan for how the "Vision Statement" can be made a reality.

The Seymour Plan, the result of that group's work, recommends the development of an electronic infrastructure to connect libraries and their users with the information and material resources of Maryland's libraries and other agencies, and opening electronic doorways to the information resources of the nation and the world.

The Seymour Plan has these objectives:

1. By June 30, 1994, the telecommunication backbone will be in place, providing 79% of Maryland library users with access to Seymour through a local telephone call.
2. By June 30, 1995, 96% of Maryland libraries will have at least dial access capability to use Seymour, with 100% by June 30, 1997.
3. The **Internet/NREN Doorway** will be available by June 30, 1994.
4. In their initial form, the **Find a Book**, **Find an Article**, **Find a Fact**, and **Find an Agency**, and **Internet/NREN Doorway** will be available by June 30, 1995. Full implementation of the Seymour services, including **Find Government Information**, will be available by June 30, 1998, with development continuing into the future.

Implementation of the Seymour Plan will rely on all appropriate national standards, among them: Z39.50 (computer interfacing), Z39.58 (common command language), US MARC, and ISO 1016000/10161 (interlibrary loan).

[3] A list of the Seymour Working Group members is given in the Preface.

How will Seymour happen?

Telecommunication component

The first Seymour implementation will be the telecommunication component. Working with a telecommunication expert at the University of Maryland, College Park, a subcommittee (the Network Cloud Group) of the Seymour Working Group prepared a draft plan for the geographic placement of communication *routers* that will form the base of each telecommunication node required to provide "local phone call" access by any library in the state.[4] The group is also considering the boundaries of local calling areas, the need for 800 numbers, and other possibilities. Libraries in each of the targeted locations will have the opportunity to host a router, with the benefit of having ready in house access to the Seymour system.

Implementation will also require development of a maintenance and "help" service to keep the telecommunication system at optimal operation levels. The requirements for this service and potential suppliers will be identified as the plan is developed.

Implementation of this component is planned to begin by June 1, 1993, with full operation in place by July 1, 1994. Further development and enhancement will be ongoing.

Resource/information services

Seymour's resource sharing and information services are designed to build on the existing bases of automation and access within the state. Maryland has relatively large "clusters" of libraries that use the same automated systems, providing bases on which to build. According to the survey "Automation in Maryland Libraries, 1991",[5] the clusters include:

CARL	University of Maryland System (13 sites) and 1 public library system
CLSI	11 public library systems
Follett	13 school systems, 5 private schools (numerous independent installations)
Columbia	2 school systems, 1 private school (numerous independent installations)
Winnebago	2 school systems (numerous independent installations)
Dynix	2 colleges

[4] See Appendix B for more complete project description.

[5] "Automation in Maryland Libraries, 1991: Cumulation of Survey Results", issued by Division of Library Development and Services, Maryland State Department of Education, November, 1991.

New clusters are emerging as other vendors' systems are selected and installed. There are numerous other local turnkey, standalone and networked automated systems in every kind of library.

The clusters are important because they potentially provide a single point or, at least, a single kind of interface, between the Seymour resource sharing services and the local automated systems used by numerous Maryland libraries. For example, Seymour could communicate with the CARL system at the University of Maryland, College Park, thus accessing the holdings information for all the UM libraries on that system. For the CARL user, access could be provided across the same interface to Seymour's services. While the CLSI sites do not communicate electronically among themselves, a Z39.50 interface made available through any of them will provide communication between the library and Seymour. Currently, a number of vendors are actively developing the Z39.50 interface for their systems, a development that is likely to increase in number and speed during FY 1993.

At the same time, many Maryland libraries (79% of the 173 respondents in a recent survey) have dial access capability.[6] That means they have the equipment, communication software, access to a telephone line and the staff expertise to use these components to dial out to electronic systems and resources.

Whether it's through dial access or a Z39.50 computer-to-computer interface, every library in Maryland has the potential to connect with Seymour and use its services.

Seymour's development and implementation will be incremental, rather than a single day when it is "turned on". This approach is necessary because of the need for a smooth migration from current resource sharing methods, including MICROCAT/ULPM and MILNET, to the new Seymour system. It will become more efficient as Z39.50 interfaces are implemented. Some of the software for the resource sharing services will have to be written and tested before implementation in Seymour. Finally, it will take some time to incorporate the many kinds of libraries in the State Library Network into Seymour, given the wide range of hardware, varying expertise with dial access and other forms of electronic communication, the need for development of policies and procedures, as well as fundamental understanding of the proposed system and its potential for serving users.[7]

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[6] "1992 Dial Access Survey Results", compiled and issued by the Division of Library Development and Services, August, 1992.

[7] See Appendix B for descriptions of the projects Interlibrary Loan, MILNET Transition, ULPM Metamorphosis, and Seymour Database Management System, all of which relate to these issues.

Find a ... services

Seymour will feature a number of resource sharing/information services. Each of these is more fully described in the "project" descriptions in Appendix D.

- **Find a Book** answers the questions: Does the title I want exist? Which libraries own it? Is it available? Please get it for me.

  In response to these questions, Seymour will query participating individual libraries' or clusters of online systems to identify, locate, determine the status and place a request for a desired title. The progress of the filling of the request will be available at any given time, and comprehensive statistics will be maintained for both individual libraries and the system as a whole.

- **Find an Article** starts with the same questions (Does the article I want exist? Which libraries own the journal it is in? Is it available? Please get it for me), but has more options available.

  - One or more indexes of periodical articles will be available online to help people find the articles they need.
  - Where full text is available, perhaps through UMI's ProQuest, the user would have the option of printing out the hardcopy or downloading the electronic form of the article.
  - If an article is not available in a Maryland library, or if the user needs it immediately, he/she would be able to place an order through a commercial document delivery service, such as UnCover, paying by credit card and selecting from a number of options for how the article would be delivered (fax, mail, etc.)

- **Find a Fact** provides access to basic reference tools that can answer "ready reference" queries: dictionary, almanac, encyclopedia, ZIP code directory, and similar tools. As this service becomes more sophisticated, the user will be able to pose a question and Seymour will use an artificial intelligence application (called a **Fetch!**) to seek the information from any information source. Until then the user will search individual tools to get the answers to questions.

- **Find a Helping Agency** enables the user to search information and referral (I&R) databases that list public and private service agencies on the local, regional and state level. For example, a user could get specific information about Red Cross services on the Eastern Shore, including location of offices

and telephone numbers.

- **Find Government and Other Information** offers online access to information databases provided by government agencies here in Maryland. Potential information databases could include the status of proposed state legislation, Maryland's Code of Regulations (COMAR), job listings at state and/or local levels, census information, registration/course information for colleges, universities and county adult education programs, local zoning regulations, etc. This service could provide a resident with access to the basic information needed from local and state government.

- **Other databases** could be made available through Seymour, including those special files many libraries create. (One librarian called these our "family jewels".) Early in Seymour's implementation we should have access to the index for some St. Mary's County newspapers, via the local automated system at the Southern Maryland Regional Library. Seymour will provide the platform and some support for libraries and other groups which want to build and/or make their database of special information available to others.

- **Internet/NREN Doorway**: If Maryland's resources don't meet a user's needs, Seymour provides access to the riches of the Internet, the nation's "network of networks" that is developing into the National Research and Education Network (NREN). Internet users currently have access to such databases of the complete works of Dante and Shakespeare, information about individual shuttle flights, the library catalogs of colleges and universities worldwide. Libraries could use this doorway to get to commercial services, like Dialog.

- As **freenets** and other public telecomputing services develop in and around Maryland, Seymour can provide access to them. Freenets offer residents access to information (like **Find Government Information**), bulletin board systems and conferences for discussing issues that affect everyday life.

When will Seymour happen?

Seymour will be developed in four stages:

1. **Physical access to the electronic infrastructure** will begin in late FY 1993 as the plan for locating and installation of routers at node locations and connection to phone lines is completed. The routers will be brought up during FY 1994. Local phone call access by 79% of libraries to Seymour by

June 30, 1994, is the objective.

2. **Updating current services** is the stage in which the migration from the current MICROCAT/ULPM and MILNET services to basic Seymour **Find a ...** services will be accomplished. Migration steps will follow this sequence.

   - Dial access to individual local online systems or to clusters is made available; in some cases this access would substitute for the loading of those libraries' records into MICROCAT.
   - Seymour software supports a Z39.50 interface to a number of systems, enabling the user to search multiple vendor systems using the same interface.
   - **Find a Book** software supports ILL of books, including searching, determining who owns it, placing request to borrow. The same "basic" ILL service is available for journal articles and reference/subject information. MILNET is subsumed by Seymour, and more libraries handle their ILL transactions online.
   - MICROCAT is phased out in all formats as online access to bibliographic records becomes more easily available. ULPM is maintained until holdings information at the volume level is readily available in local systems and/or access to full text is readily available.
   - Dial access is offered for individual information and referral (I&R) files.
   - Libraries use Seymour as a doorway to the Internet, using the riches found there to augment Maryland resources.

3. **Innovation & new services** move beyond the migration phase into new services and capabilities as Seymour's special capabilities are developed.

   - In **Find a Book** Seymour automatically checks all available files for a requested item, determines its location and availability and places a request based on the library's defined "lender string". The system will provide status information at any time, and complete local and system statistics will be maintained automatically.
   - **Find an Article** offers access to journal index online, ability to place requests with Maryland library, and access to commercial providers are offered. When possible, the user will receive the needed article shortly after placing the request.
   - **Find a Fact** develops from searching file-by-file through a number of information resources into an intelligent **Fetch!** capability that searches available resources on behalf of the user.
   - A "virtual" statewide I&R file is available as local files are

made accessible through Seymour. The **Fetch!** capability searches across the files on behalf of the user.

- At least one state government database is made available online via Seymour.
- Using Seymour's database development platform, libraries and other groups begin to make their local "special" databases accessible .

4. **Vision Statement is a Reality** is the last stage of development. Seymour offers the sophisticated services that enable Maryland residents to get the materials and information they need. At this stage, libraries are still intermediaries for people who need assistance or who do not have personal computer access to Seymour, but many residents use it directly from home, school and office.

Where will Seymour happen?

The telecommunication component will begin with the existing nodes (at College Park and at the Enoch Pratt Free Library), then extend out to the new nodes to be placed at strategic locations around the state. When implementation is complete, the where will be in every local calling area in the state.

Implementation of Seymour's **Find a...** services will begin with the nucleus of automated libraries, the brokering agencies (Regional Library Resource Centers, State Library Resource Center), contributors to MICROCAT/ULPM, MILNET users and those with a dial access capability. Access to Seymour by other libraries throughout the state will occur when they have the ability (equipment and expertise) to access the system and they buy into the benefits offered by using the system.

Ultimately, Seymour should be accessible and in use widely in every county.

At what cost?

Estimated, preliminary costs for installation of telecommunications equipment and the ongoing operational costs are provided in the descriptions of Project BACKBONE and Project LINKUP. [8]

No costs have been determined for Seymour's **Find a...** services. The Seymour

[8] See Appendices B-1 and B-2.

Working Group recommends that a Request for Information (RFI) be sent to potential vendors with full descriptions of all of the **Find a ...** services and the plans for phased implementation. The responses to the RFI would provide information about available software and what would need to be developed, and potential costs. This process would serve as a catalyst for vendor developments in this area of statewide coordination of services.

Who will pay?

There are several potential sources of implementation funds:

- The Division of Library Development & Services anticipated granting Library Services and Construction Act (LSCA) funds for Seymour.
- The National Science Foundation has grant funds available for Internet/NREN developments, including developing statewide telecommunication capabilities
- Libraries may be asked to pay some of the installation and/or basic access costs to use Seymour.

In addition to these sources, we think Seymour can attract grant funds from a variety of sources, particularly because it builds on resources available in all kinds of libraries and promotes information access for the citizen in new and interesting ways. As Seymour's implementation develops, specific attention should be given to alternate sources of funding.

Seymour has the potential for providing local and state government with an excellent way to reach its citizens with information and access to services. Government could share development and implementation costs for **Find government and other information.**

But what about ... ?

... Support services? Both the telecommunications component and **Find a ...** services will need ongoing support.

Telecommunication support will include at least one "trouble desk" and routine help for users as they connect with Seymour. This support could be contracted out within the library community or to some other agency that has responsibility for the telecommunication backbone.

Find a ... support could be listed in the system as **Ask for Help!** People will need help with searching, understanding what the system will/will not do, how to handle new capabilities as they are introduced, why they were logged off during a search, how to place and track an ILL request, and many other kinds of questions.

In the beginning support could be help by phone or via electronic message to a person or group designated with this responsibility. Ultimately we envision a person's image appearing on the Seymour screen to interact with the user, helping to determine the exact question and/or problem and providing the necessary information or connecting them with the person who can help. Behind it all is a cadre of user support specialists.

This service could include a backup reference service, the next step if a question could not be answered through Seymour.

The Regional Library Resource Centers (at Hagerstown, Charlotte Hall and Salisbury) and the State Library Resource Center (Enoch Pratt Free Library) are well positioned to be the primary providers of user support and backup reference services.

... ***Education and training*** will be a major undertaking in bringing Seymour to its full potential.

Education is essential from this point forward, helping libraries to understand what Seymour is, how it will develop, how it can be useful to them, and what they will need to do to become players. As Seymour moves through its developmental stages, we will need to continually update librarians about where Seymour is and where it is going.

Training will be an ongoing need. It will begin with training library staff to use dial access or a window through their local library system to move electronically beyond their library. As Seymour's **Find a ...** services are brought up, training is needed to make staff proficient in using the system so they can make the most effective use of it.

As with **support services**, these are areas in which the RLRC's and SLRC will have a primary role. Each is currently providing a variety of awareness and technical workshops on information technology topics. We can also draw on the trainers on staff in many libraries.

... ***Advocacy*** is about selling Seymour to the people, groups and agencies that can help and support its future growth. These can be individuals, government agencies, legislators, vendors, foundations and others.

As Seymour begins to develop, a marketing plan should be prepared and implemented to make sure that the groups and agencies which can help us know about Seymour and are involved in its future.

Who will make Seymour happen?

Just as there is a sequence to Seymour's development and implementation, there is a sequence of people and groups **who will cause it to happen**:

- The Seymour Working Group has responsibility for delivering an implementation plan that is accepted by the State Library Network Coordinating Council.
- The Network Coordinating Council will work with its constituent groups for feedback and support of The Seymour Plan.
- The NCC may also want to work with other groups, both inside and outside the library community, to make people aware of The Seymour Plan and to garner support for it.
- The Division of Library Development and Services (Md. State Dept. of Education) will seek funding, including LSCA. They can play a statewide coordinating role.
- The Regional Library Resource Centers, State Library Resource Center and UM System staff bring their education/training support, backup reference and referral activities, and technical expertise to the development and implementation.
- Other groups (ad hoc or existing) can seek funding from government and private sources.
- Working groups will need to be appointed to help design and implement Seymour's various **Find a ...** services as they move from basic to sophisticated access.

The **implementation** may be handled in several ways, depending on funding sources and who is in a position to handle procurement and implementation effectively.

- Telecommunication might be handled by the University of Maryland, College Park, which already has connections in place to support its intra-campus communications. They could also handle the user support responsibilities for telecommunication. There may also be a role for the State Library Resource Center here.

- Procurement and implementation of Seymour's **Find a ... services** could be contracted with a library willing and able to support it, or a non-profit agency could be established or designated to handle it. There are several libraries and at least one library corporation which could handle this project. Find a ... services may be mounted on a system with the processing, memory and ports necessary to support it. Individual databases could be mounted on computers in a number of locations and linked electronically.

Seymour will have a number of **governance** matters that must be managed:

- Network policies and procedures in an evolving electronic system
- Development issues, particularly as Seymour moves beyond the basics. What are the possibilities? Who decides what will be implemented?
- As other agencies, such as government ones, become involved, who defines and oversees access to government databases? Who provides user support?

The Network Coordinating Council, because if its representative nature, is in a position to address these issues and make recommendations for how they should be handled.

Who will use Seymour?

Seymour is designed to be used by Maryland residents in libraries and from home, office or school. The extent of direct access by residents will evolve from the current individual access to some libraries' online public access catalogs (like the public libraries in Montgomery and Howard Counties and the University of Maryland System) to comprehensive access to the services available in the completed Seymour. People at the library can access Seymour through the library's local online system or via dial access using a library computer and modem. People at home will need a microcomputer, modem, telecommunications software and access to a telephone line to dial into Seymour.

Who is this Seymour, anyway?

Seymour is the name selected by the Working Group as it prepared this plan. MAILS, the earlier name suggested in the "Vision Statement", was dropped because an organization in Maryland is named MAILL. So, after numerous false starts, the name Seymour was adopted by the group. It is **not** an acronym.

Seymour is a fictitious retriever, very friendly, fun and helpful. We think this is a great image for the system we created, which we also want to be very friendly, fun and helpful.

The Division of Library Development and Services is in the process of registering **Seymour** as a servicemark.

The State Library Network Coordinating Council's "Vision Statement"
May, 1991

THE MARYLAND INFORMATION/LENDING SYSTEM: * ELECTRONIC DOORWAYS IN MARYLAND'S LIBRARIES IN THE YEAR 2000

A scenario of what the Maryland Information/Lending System will do:

Helen's father needs to start kidney dialysis treatment soon. While the doctor has provided some information, the family wants to understand the treatment more and needs specific information about dialysis centers, as well as the costs and whether federal or state agencies pay any of them. Someone also told her that there are some tax breaks for which he might qualify.

She dials into her local public library's online system. The screen menu offers her choices of searching the local catalog of materials, a statewide information & referral directory, and the Maryland Information/Lending System (MAILS)* which provides access to the indexes and some specialized databases in libraries across Maryland.

First she searches the local library's catalog for recent books on dialysis treatment and, identifying one that looks appropriate, places a request for it. Next she asks to search the periodical database, so she can find some articles, especially any that might help the family understand what to expect with this new situation. She identifies two possible articles in consumer health magazines; she places a photocopy request for them.

The Information & Referral Directory is her next search. Following the system's questions about her information need, she is able to print out a list of dialysis centers within 10 mile radius of her father's house. The list includes phone numbers and contact persons.

She starts another I&R Directory search about state/federal funding of dialysis treatment. Through the facilitation of the system, she retrieves summary information about how Maryland dialysis patients' costs are paid. She prints out the text, including the telephone number of an agency that is designated to answer questions about costs and to refer people to the appropriate agencies to apply for payment or reimbursement.

Finally, she asks to search a federal services information database and checks for tax benefits for dialysis patients. The system gives her a summary, in lay language, of the relevant tax law, with citations. She prints out the text.

Helen likes using MAILS through her local library. It doesn't require her to have special searching skills or any particular ability to deal with computers. She can put her inquiries in her own words, which the computer is able to relate to the numerous indexes it uses. Her "visit" to the library this evening has given her enough information to start dealing with this new family situation.

*The name **MAILS** was dropped in favor of **Seymour.**

The Maryland Information/Lending System

The system's basic structure:

The system will **connect clusters (CARL, CLSI) of automated Maryland libraries.** One cluster may serve as the host/lead in managing the system, or this function might be handled by a single library or outside agency. **Libraries using other automated systems and those not automated will also be connected,** though the primary components will be the interlinked clusters. Libraries in a cluster will share among themselves as the first level of interaction, with linkage to the Maryland Information/Lending System interface beyond the cluster when the query/activity necessitates it.

ASSUMPTIONS:

1. *Many users will be people in their homes and offices. They will have computers with the ability to dial into databases, receive faxed information, etc. Maryland libraries of all kinds will also have these capabilities.*
2. *A state-level agency (DLDS, NCC, new authority?) will be responsible for the initial and on-going development of the system. Operation of the system may be contracted out to a vendor or to a Maryland library.*
3. *Considerable effort and funding will be needed for non-automated libraries to automate their collections, starting with retrospective conversion. This will make them full stakeholders in the system.*
4. *The primary motivation for libraries to participate will be to have access to materials and information beyond their own collections and means. The simplicity of the system's operation (from the user's perspective) will make it attractive to most libraries.*
5. *There are many "have-not" libraries in the state which will need the equipment to access MAILS. Equipment should be generic, simple in design and function, as well as inexpensive. Training must be available to enable them to be effective users.* ***Funding needs to be sought immediately, either by the libraries or by other groups.***
6. *The technology to accomplish this vision is available now, but vendors, the library community and funding sources must be convinced of the need to implement it and be encouraged to follow-through.* ***Efforts to encourage vendors to actively develop and support this system must begin immediately.***
7. *Necessary developments in the application of artificial intelligence to natural language queries should be ready later in the projected time frame.*

8. ***MAILS will function as a Maryland NREN and will be linked to NREN for access beyond the state's system. NREN (or its next generation) will be one of the possible choices available to MAILS users.***
9. *A ubiquitous and inexpensive (to use) telecommunication system will support the system.*
10. *The clusters that are linked in this model could be derived from current system configurations, such as the CARL or CLSI systems in the state, or could be created by type of library, such as clusters of school systems.* ***The development of the clusters needs to be promoted immediately.***

The MAILS system linkage interface will handle these functions:

- User will **initiate search** for item (known/unknown, information query, etc.) and retrieve information on the items, holdings, and shelf status of the selected item(s) in any of the libraries linked to the cluster.
- User will **initiate request** to borrow item, get photocopy of needed article or information, book video, etc, perhaps asking for it to be faxed. She could also electronically download all or selected pieces to her home computer.
- System will automatically **route request appropriately** based on profiled maps, taking into account location, means of delivery, date needed, reciprocal and other borrowing arrangements, equity among net lending libraries.
- User will receive **status report on demand** and have the ability to alter/delete request at any point.
- Management reports, including cumulative and analytical statistical reports, will be automatically generated.

ASSUMPTIONS ABOUT FUNCTIONS:

1. *End users and library staff using the system will have sufficient knowledge of computers and of how to seek information. This system, while it will facilitate use of natural language and eliminate a lot of guesswork, will still require users to have a fair understanding of what they want and that they have succeeded when their session is ended.*
2. *Users who have difficulty reading (illiterate, learning disabled, ESOL individuals) may not be able to use the system effectively.*
3. *We don't know what document delivery technologies will be available by the end of the decade and how they will affect this system. Also, as newer technologies come along, there is a catch-up period during which people using earlier ones have to switch over. That is a cost and education issue. The*

system will need to support a variety of high and low tech delivery solutions.

4. *The routing of requests appropriately premise will require the system to have considerable knowledge of library's lending/borrowing patterns, relationships among libraries, locations, technological capabilities. This will probably require the codification and formalization of what have been informal arrangements. How will libraries buy in to this level of information and control? What incentives will there be?*
5. *Funding arrangements and system-managed allocation of ILL requests will support libraries that are net lenders.*
6. *Insuring the privacy of individuals using the system is essential, including what they searched, information they retrieved, what files they accessed.*
7. *The query function will enable users to identify items, find out where they are located and the current circulation status (is it on the shelf? out in circ.? on reserve? non-circulating?)*
8. *The system will be very user friendly. The perception of the user will be that MAILS simply pulls together the information they need. This will belie the actual complexity of the system's operations.*
9. *Requests for borrowing materials can be initiated online from a record extant in the system or by creating a request from scratch.*
10. *Library or MAILS staff support will be needed to help users who have difficulties using the system. MAILS will provide help information on its functions, but it will also provide information on and access to a person who can help. To be determined: who provides the information, at what hours?*

The system will provide access to a multiplicity of information resources:

- Bibliographic records of all formats of materials
- Statewide information & referral file, including state, county, regional, and local levels of information
- Online files of locally generated databases, such as the newspaper index for newspapers in St. Mary's County
- Locally mounted commercial indexes/full text databases for use statewide
- Gateway access to commercial and other databases outside the system
- Linkage to other ILL systems worldwide
- The system will serve as a source for bibliographic records for participants, though access to other sources of records will be available, perhaps through the gateway to files outside the system.
- A sophisticated thesaurus for assigned subject headings/descriptors will enable users to employ common terminology but retrieve appropriate responses through the intervention of the linking thesaurus.

ASSUMPTIONS:

1. *Libraries will convert their catalog holdings to machine-readable form and contribute them to MAILS. They will have the money and the need/desire to tackle these projects. 75% (?) of the holdings of all participating Maryland libraries will be available bibliographically in the system.*
2. *Libraries will use the USMARC format and follow other national standards for machine-readable records and other database files to ensure efficient querying of the system, improving user access to the materials/information needed.*
   NOTE: Scanning and other digitizing techniques combined with artificial intelligence may negate the need for libraries to ensure compliance to national standards.
3. *The state will make its machine-readable databases available to the public. MAILS is an appropriate mechanism. This will require substantial work in developing and implementing a state information policy that will open access to databases. The same is true for county and other local governments.*
4. *A statewide I&R file could go beyond libraries to include files from human service agencies, both public and private. There is a huge potential network here that could be coalesced into MAILS.*
5. *Libraries and other groups that are creating local files in machine-readable form need to be encouraged to contribute them to MAILS or provide access via the clusters. As automating files becomes more the norm, we can expect to have access to a tremendous variety of information, including both indexes and full text. Full text should be the preferred form.*
6. *As a state we should be able to mount MARC tapes, tapes from vendors like Information Access (for magazine indexes and full text), MEDLINE, etc. Libraries should not have to hold individual subscriptions.*
7. *Linking thesaurus development like the Universal Medical Language being developed by NLM should be an underlying component of this system. While other technological pieces are in place, this one may take a while.*

Approved by the State Library Network Coordinating Council at its May, 1991, meeting.

Project BACKBONE

PURPOSE: Develop a telecommunications backbone for SEYMOUR and link major library centers in Maryland. To be connected, the affected systems must have a computer system capable of communicating using the TCP/IP protocol and, once connected, will be able to transfer electronic mail, "visit" each others systems, examine contents of catalogs and travel along NREN/Internet and retrieve information from a variety of other database sources.

STRATEGY: These library centers will be connected via digital links. The minimum speed for the backbone segments is 56kb (kilobits) per second. The following components are included in a segment:

- leased digital line for data transmission
- CSU interface equipment to the digital line
- router providing interface between the network and computer

To minimize line costs and to create a non-usage sensitive, local call environments, a "spoke and hub" arrangement is proposed. Each system is connected into a hub at the University of Maryland College Park (UMCP), Pratt, University of Maryland Eastern Shore (UMES) or the University of Maryland at Baltimore (UMAB). The hubs are connected either by the UM Network or by Internet connection forming a complete integrated network. Since the TCP/IP protocol is recommended for the network, services such as mail and node visitation (via telenet/ftp) are possible.

Local call access will be available to 72 percent of Maryland's residents with this initial project. An additional 17 percent will be reached in Project Linkup.

TARGET GROUPS: The general population in 19 of Maryland's 24 local jurisdictions (counties + Baltimore City) are targeted for immediate service via the backbone. With the backbone in place, access to SEYMOUR for these populations amounts to a local call. The jurisdictions of fully 72 percent of the state's population are reached in this project.

Target library centers are as follows: **Baltimore City and County, Cecil,**

Harford, Howard, Anne Arundel, Prince George's, Wicomico, Washington counties, and the Southern Maryland Regional Library Association. Equipment will be installed in libraries that have the required computer capabilities. The library centers could be public libraries (most of the target counties' library systems use CLSI) or others. 79 percent of Maryland's libraries will have access to SEYMOUR with the completion of this project.*

*MILO Library Listings 1990

County/City	Target Pop.	% of Co./City
Allegany County	72,422	97%
Anne Arundel	367,089	85%
Baltimore City	736,014	100%
Baltimore County	675,500	97%
Calvert	28,948	56%
Carroll	119,011	97%
Cecil	40,939	57%
Charles	92,776	92%
Frederick	123,102	82%
Garrett	4,373	15%
Harford	104,040	57%
Howard	144,365	77%
Montgomery	138,982	18%
Prince George's	681,037	93%
Somerset	19,354	83%
St. Mary's	9,474	12%
Washington	117,561	97%
Wicomico	71,063	96%
Worcester	14,869	42%

Source: 1990 Census Data

YEARS: Initial implementation will begin in late FY 1993. This project will be completed by June 30, 1994.

COSTS: See chart.

EDUCATION/ TRAINING: Education and training is needed at four levels: **technical support, library staff user, interlibrary loan user, and end user.**

Technical:

Specific technical training necessary at hub sites and at local system interface points where routers are placed. Local automation staff can be trained to support minimal maintenance and swapout procedures. UM system and Pratt staff will coordinate training at this level. There will be a level of ongoing intercept, troubleshooting support which will need to be centered at hub sites at Pratt and the UM system. A "Help Desk" which is oriented to content and searching paths might also be developed to assist travelers.

Library public service staff:

Library staff in all jurisdictions will be trained in use of system features and content of databases, e-mail, etc. in a train-the-trainer format. Core staff in each jurisdiction will engage in training activities for its own staff. Hub sites and DLDS will coordinate.

Interlibrary loan staff:

Interlibrary loan and other resource sharing activities will need another level of training which will address local policies and lending and loan leveling environments. Pratt staff will take lead role with DLDS in this training component.

End user:

End user instruction at a broad-based level can be handled by PR publicity campaign by NCC, DLDS, et al, and basic steps of access as conveyed by informational bookmarks, single page guides, etc. Local jurisdiction may then follow with more detailed explanations of SEYMOUR service as well as "extras" available in local system access when they choose to begin it.

NOTES: This basic backbone configuration can be expanded initially or later in development to other systems with established automated systems able to support TCP/IP protocols, e.g., DYNIX. The spread of hubs in this way immediately broadens populations reached as new exchanges are folded into the net.

System	Site	Mile	Installation		Monthly Rate (5 year)				
			56 K/sec	Router/I/F	Chan Term	Mileage Fix/mile		Total	Total
					84.47	88.00	3.28	Month	Year
Hub	Pratt			16500.00					
Cecil	Elkton	48	1500.00	6000.00	168.94	88.00	157.44	414.38	4972.56
Harford	Belair*	22	1500.00	6000.00	168.94	88.00	72.16	329.10	3949.20
Baltimore	Baltimore	0						600.00	7200.00
Balto Cty	Towson	8	1500.00	6000.00	168.94	88.00	26.24	283.18	3398.16
Howard	Columbia	14	1500.00	6000.00	168.94	88.00	45.92	302.86	3634.32
Washington	Hagerstown	64	1500.00	6000.00	168.94	88.00	209.92	466.86	5602.32
Carroll	Westminister*	30	1500.00	6000.00	168.94	88.00	98.40	355.34	4264.08
Anne Arundel	Annapolis	22	1500.00	6000.00	168.94	88.00	72.16	329.10	3949.20
Frederick	Hood (?)	45	1500.00	6000.00	168.94	88.00	147.60	404.54	4854.48
Hub	UMCP			7500.00					
SMRL	Charlotte Hall	31	1500.00	6000.00	168.94	88.00	101.68	358.62	4303.44
Montgomery	CARL ??								
Prince Georg	Hyattsville	12	1500.00	6000.00	168.94	88.00	39.36	296.30	3555.60
Hub	UMES			6000.00					
ESRL	Salisbury	0	1500.00	6000.00	168.94	88.00	3.28	260.22	3122.64
			16500.00	96000.00	1858.34	968.00	974.16	3800.50	45606.00

Notes:
* System planned for 1993
? Connection provided via CARL/Internet, cost to be assigned

Project LINKUP

PURPOSE: This project builds on the Seymour Backbone Project by providing a telecommunication infrastructure and gateway that will provide the same access, including Internet/NREN, to areas not directly served by a SEYMOUR Backbone hub or component.

STRATEGY: Switching and terminal server equipment and modems will be placed strategically around the state in areas not served by the backbone. Six sites will be selected to afford maximum telephone exchange coverage and take advantage of best and most economical way to access a hub or backbone component. Once placed and in operation, the Linkup site will manage local call access to Seymour for its area. Connection will be made using Primary/Basic Rate Interface (PRI/BRI) or Switched Group Access (SMDS) telecommunication schemes.

TARGET GROUPS: This project focuses on the general population of the five remaining Maryland jurisdictions not reached with the backbone project: Caroline, Dorchester, Kent, Queen Anne's and Talbot counties, and extended coverage to three of the initial backbone jurisdictions: Garrett, Montgomery, and St. Mary's counties. With the completion of this project, 89 percent of the state's population can access Seymour by a local call.

County/City	Target Pop.	% of Co./City
Caroline County	27,035	100%
Dorchester	26,964	89%
Kent	17,518	98%
Queen Anne's	30,439	90%
Talbot	26,478	87%
Garrett County	23,765	100%
Montgomery	747,210	99%
St. Mary's	73,974	97%

Source: 1990 census data

96 percent of Maryland libraries are able to offer SEYMOUR access with the completion of this project, according to MILO library listings, 1990.

YEARS: This project will begin in FY 1994 and be completed by June 30, 1995.

COSTS: See chart.

EDUCATION/ TRAINING: Key staff at host sites will need minimal training in maintenance of hardware. Each site would receive help from nearest hub or component for troubleshooting.

Same level of training for staff and end user as provided for in Project Backbone will be extended to the five counties receiving access for the first time.

NOTES: Included in this phase will be approaches to libraries which can provide a home and minimal support for the hardware. For example, Washington College might be approached to house the terminal server for Kent County, Rockville Branch, Montgomery County Department of Public Libraries for Montgomery County and Chesapeake College or the Wye Institute for Queen Anne's County. Another criteria for selection of host sites in these areas will be geographic position in regard to LATA and local calling areas.

16-Sep-92

Seymour Telecommuniations Connection Phase II

System	Site	Mile	Installation		Monthly Rate (5 year)					Terminal Server Modems	Digitech	$/hr 6.00 Break
			56 K/sec	Router/I/F	Term	Mileage Fix/mile		Total Month	Total Year			
					84.47	88.00	3.28					
LATA	Hagerstown										2500.00	
Garrett	Oakland	100	1500.00	6000.00	168.94	88.00	328.00	584.94	7019.28	4900.00		94.16
LATA & Hub	Baltimore	0		3000.00				600.00	7200.00		2500.00	
Near Western	Thurmont	50	1500.00	6000.00	168.94	88.00	164.00	420.94	5051.28	4900.00		66.82
LATA & Hub	Washington			3000.00							5000.00	
Montgomery	Gaithersburg	20	1500.00	6000.00	168.94	88.00	65.60	322.54	3870.48	4900.00		50.42
St. Mary's	St. Mary's	55	1500.00	6000.00	168.94	88.00	180.40	437.34	5248.08	4900.00		69.56
LATA & Hub	Salisbury			4500.00							7500.00	
Kent	Chestertown	40	1500.00	6000.00	168.94	88.00	131.20	388.14	4657.68	4900.00		61.36
Talbot	Denton	35	1500.00	6000.00	168.94	88.00	114.80	371.74	4460.88	4900.00		58.62
Caroline	Denton											
Dorchester	Cambridge	0	1500.00	6000.00	168.94	88.00	3.28	260.22	3122.64	4900.00		40.04
			10500.00	52500.00	1182.58	616.00	987.28	2785.86	33430.32	34300.00	17500.00	

97300.00		51800.00

Appendix B - 2

Project INTERLIBRARY LOAN

PURPOSE: Provide resource sharing and interlibrary loan (ILL) functionality for Seymour.

STRATEGY: Develop request for information (RFI) and send to vendors for resource sharing software to be provided to "vendor clusters" in the state. Seymour hub sites/clusters would mount this software on their systems. It would support: 1) ILL request by customer when placehold or other ILL request arrangements not allowed by site; 2) input of resident system preferences, overrides and defaults resulting from institutional agreements or site resource sharing preferences and exclusions; 3) manual intervention by lender, i.e., target institution may require manual intercept and review before electronic system processing; 4) ILL file maintenance as appropriate; and 5) comprehensive ILL statistics.

Review RFI from vendors and make recommendations for purchase and integration to clusters.

TARGET GROUPS:

- Library automation vendors
- Seymour hubs and system cluster sites

YEARS: Prepare RFI for distribution to vendors by January 1993. Review RFI's and make recommendations by September 1993.

COSTS: Costs are unknown at this time, we expect to get some idea through the RFI process.

EDUCATION/ TRAINING: Work with Seymour client groups, public service, ILL and systems staff to help evaluate software and train in use and maintenance of Seymour's ILL function.

NOTES: A clearinghouse, MILO-like operation may be needed at cluster sites or perhaps one or two central sites to bridge phasing-in steps of this project.

Project MILNET TRANSITION

PURPOSE: Provide for the migration of MILNET resource sharing functions (interlibrary loan and database maintenance for non-automated MICROCAT libraries) currently carried out on the Auto-Graphics bibliographic utility (AGILE III) into Seymour.

STRATEGY: Transfer the holdings contributed by non-automated MICROCAT contributing libraries to a central system file. These are libraries that have done retrospective conversion projects, but the records are not loaded into local online systems.

Provide access on Seymour to Library of Congress MARC records, including an editing and downloading capability, so that libraries can use the MARC records for current cataloging and retrospective conversion projects. The resulting records with holdings will also benefit Seymour.

Implement Seymour interlibrary loan capability.

TARGET GROUPS:

- MILNET sites:

  Anne Arundel County Public Library
  Baltimore County Public Library
  Carroll County Public Library
  Charles County Community College
  Eastern Shore Regional Library
  Enoch Pratt Free Library
  Harford County Library
  Howard County Library
  Montgomery County Department of Public Libraries
  Prince George's County Public Library
  Southern Maryland Regional Library Association
  Western Maryland Public Libraries

- Interlibrary loan staff throughout the State Library Network
- Libraries that need to do retrospective conversion projects

YEARS: Planning and initial implementation will begin in FY 1994, with full implementation by June 30, 1995.

COSTS: Costs are not known yet. A Request for Information (RFI) process will be be completed by January 15, 1993. This project will be included in the RFI.

NOTES: In implementing this project, the issue of centralized versus de-centralized location of database files (such as the records and holdings of non-automated libraries) and interlibrary loan software needs to be decided. This same decision process will apply to databases created or added through Project Add and Access a Database.

Whether the interlibrary loan function will be centralized or decentralized is also an issue. Other factors influencing the decision include:

- transition of the dedicated line MILNET users, who are accustomed to a certain level of service
- how non-MILNET libraries will use the interlibrary loan system, such as through a connection to their local automated system or via dial access
- what options and possibilities OCLC member libraries have
- how intra-system ILL libraries, like those on CARL, will interface with Seymour's ILL function

If we make an LC MARC records file available, should we just purchase and mount the tapes, or should we contract with a vendor to provide this capability? When a library converts its records through Seymour, how will those records be made available so that all Seymour users will have the advantage of location information for the added records? What policies will be needed to encourage libraries to contribute or make these records available?

Finally, how will we handle the need/desire of end users (people dialling in from home or office) to place requests in Seymour? Policies, procedures, fees, etc., will have to be determined.

EDUCATION/ TRAINING: MILNET users will need to be made aware of Seymour's possibilities, and they will need to be actively involved in the planning for the transition.

Other libraries will need awareness training for Seymour's possibilities and how it will fit their libraries' needs and capabilities.

For both MILNET users and other Network libraries, skills training will be done to help them use Seymour's ILL function effectively. This might be handled through a train-the-trainer effort that will prepare trainers in strategic areas statewide. The Regional Libraries and SLRC can be very helpful here.

Project ULPM METAMORPHOSIS

PURPOSE: Prepare and position the Union List of Periodicals in Maryland (ULPM) database to enable users to locate journal holdings in Seymour.

BACK-GROUND: The Find an Article component of Seymour is designed to link the user with access to the journal holdings that will fill a photocopy request. Currently in Maryland ULPM is the most comprehensive source of holdings information available, though some libraries are developing holdings information in their local online systems. ULPM is still needed in Seymour, at least in the near term.

STRATEGY: In conjunction with Project Find an Article, find suitable controlling and maintenance software to support ULPM. Decide whether the file will be maintained as a central, contracted or distributed file. Develop a plan for input and maintenance of the file.

Determine the need for ULPM products, like microfiche. Also consider the possibilities of incorporating other periodical holdings not currently in ULPM, such as the union list maintained by the Maryland Association of Hospital Librarians (MAHSL), and the holdings of some of the major public libraries.

Study potential links between this file and existing or developing article finders and full text databases, such as UnCover and ProQuest.

TARGET GROUPS: ULPM participants, software vendors, Seymour users, and possible participants like MAHSL.

COSTS: Costs are unknown. This project will be included in the Request for Information that will be issued in Fall 1992.

NOTES: The impact of phasing out of the MICROCAT/ULPM CD-ROM products will be more acutely felt by Project Linkup libraries that are not immediately able to dial into or use a local system connection to Seymour. We may still need to issue MICROCAT/ULPM products to meet these needs.

EDUCATION/ TRAINING: Technical staff involved in the maintenance or transfer of file holdings at hub sites or with the vendor will need to be trained.

Project SEYMOUR DATABASE MANAGEMENT SYSTEM

PURPOSE: Provide a method for loading and supporting in Seymour locally created from libraries and other groups that lack automated system platforms. This project will help make available resource files (like indexes, query files, and other locally created information files) that would otherwise be inaccessible to the Seymour community.

STRATEGY: Determine the specifications for database management system (DBS) software for Seymour.

Mount at hub site(s) a database management system to be used to create and maintain locally generated resource databases.

Determine criteria for the creation of new databases on Seymour. This will include setting standards for timely maintenance of the file, restrictions (if any) on its use in Seymour, guidelines for resource files eligible to be loaded, and costs or fees, if any.

Libraries and other agencies that want to contribute a file and make it available on Seymour will provide a Seymour analyst with a template of information about the file. The analyst will handle the preliminary arrangements and works with the agency to ensure successful loading of the file. When the database is complete, access will be provided to Seymour users through screen menus.

TARGET GROUPS: Beneficiaries of this project are Seymour users, including library staff, end users and other agencies that access the Seymour system.

The groups which will use the database management system software to make their resource files available will include libraries, government agencies and others.

YEARS:

- Specifications will be determined by June, 1993.
- The software will be purchased and installed by June 30, 1994.
- Policies, procedures and other preliminaries will be complete by July 1, 1994, after which agencies can start to create databases on Seymour.

COSTS: Costs are not known at the present time. This project will be included

in the proposed Request for Information (RFI) that will be issued in Fall, 1992.

NOTES: This project could be helpful to freenets that will develop in Maryland There also possible file transfer and creation activities.

This project also supports the ADD AND ACCESS A DATABASE PROJECT.

While this will be an important service in Seymour, it will require some Seymour staff time to coordinate and support it.

EDUCATION/ TRAINING: Training will be needed for hub/central site staff in how to use the software. Agencies contributing files will also need to be trained in procedures, etc.

Project USING INTERNET VIA SEYMOUR

PURPOSE: Develop, promote and facilitate access by Maryland libraries to the Internet/NREN through Seymour.

STRATEGY: Provide Maryland library directors with the information they need to enable their libraries to become Internet/NREN users. A packet of materials will be prepared that includes information about Internet/NREN and options available to libraries, password application process, costs and training.

Plans will be developed for all of the telecommunication hubs to manage access to the Internet/NREN. This will include determining the maximum number of passwords that can be supported by each hub, developing procedures needed to support and extend access in a hub's service area, and developing operational guidelines.

Training packages will be prepared and training sessions will be held across the state.

The immediate Internet "full listening nodes" available for this project are the University of Maryland College Park and the Enoch Pratt Free Library. There may be others added later.

TARGET GROUPS: Library directors and staff in all Maryland libraries are the target groups.

YEARS: The costs and support requirements will be determined by December, 1992. Library directors will receive the information packet by April 30, 1993. The training packets and training curriculum will be prepared by June 30, Training sessions will be offered in late spring, 1993, continuing through the next fiscal year.

COSTS:

- training materials
- password fees (libraries may be assessed these fees)
- computer storage: the costs incurred by the full listening nodes at UMCP and Enoch Pratt for maintaining machine addresses needed to direct e-mail

NOTES: This project will be an ongoing activity that needs central coordination to be effective. The Internet is complex and constantly changing. Users will need up-to-date information about new resources and how to search them.

Machine addresses need to be maintained. Training materials will need to be updated.

EDUCATION/ TRAINING: Librarians will need awareness training to help them understand what the Internet is and what possibilities it has.

Training will focus on the skills needed to use the Internet. We could use a train-the-trainer approach to develop a cadre of people to offer workshops around the state. The regional libraries and State Library Resource Center could hold workshops, and the libraries serving as hubs in the backbone might be approached about holding sessions.

Training could be targeted to different segments of the library community. For example, school library media specialists will be interested in different Internet resources than many special libraries will.

Project FIND A BOOK

PURPOSE: To enable library staff users to identify, and locate needed materials and, if appropriate, to place an interlibrary loan (ILL) request.

STRATEGY: Using Seymour, a library staff person or end user will have electronic access to the bibliographic records of Maryland libraries, including holdings and circulation status information. Interlibrary loan requests will be handled online by Seymour, including directing requests through each library's borrowing path, providing status reports, and maintaining statistical information.

Find a Book will become increasingly sophisticated in its ability to connect bibliographic databases and manage ILL traffic. For example, initial access to bibliographic records may be done through separate searches of individual libraries' automated systems. As vendors incorporate the Z39.50 standard to interfacing software, this searching will become transparent to the user as Seymour automatically searches the universe of databases. Likewise, placing an ILL request may require the library staff to be very directive in the early develolpment, with Seymour assuming more of the responsibility for transparently directing requests as the system is further developed.

TARGET GROUPS: Initial implementation will focus on current MILNET users, libraries with local automated systems that interface with Seymour, and libraries with basic dial access capability. subsequent implementation will ensure that all libraries in the state that choose to participate can do so. Finally, any Maryland resident with a dial access capability could access and use Seymour.

YEARS: Implementation will begin in FY 1994, following the necessary procurement process. Over the following three years (FY 1995 - FY 1997), the Find a Book software will assume more responsibility for managing the transactions, requiring less interaction from the user.

COSTS: No cost information is available now. An RFI will address this question in Fall, 1992.

NOTES: This project is closely related to the MILNET/MICROCAT Phoenix Project which plans for the transition from current systems to the proposed new ones.

State Library Network policies and procedures may have to be revised to be effective in the new Seymour environment. There may be fees involved in the lending of materials on interlibrary loan, leading to questions about who pays what to whom, and under what circumstances.

EDUCATION/ TRAINING: Find a Book "awareness" education will be needed to help librarians understand what this service does and how it will fit into their library operations. Introductory sessions will be held with MILNET users, MAILLS, ILL staff in all kinds of libraries and others involved in ILL activities.

Training will focus on the skills needed to use Find a Book effectively.

The Regional Library Resource Centers, the State Library Resource Center and other appropriate trainers can be responsible for these two efforts.

Project FIND AN ARTICLE

PURPOSE: To enable users to identify and locate articles they need in periodicals and scholarly journals.

To deliver those articles to the user.

STRATEGY:

Locating the article

Choosing the index: Seymour will guide the user through several menus in order to choose one or more periodical indexes for online searching. If the user cannot or does not want to select specific indexes, then a default index of a large number of general periodicals would be selected.

Searching the index: The user will have numerous searching options, including author, keyword, subject, combinations of words, and limits by date(s), language, a specified journal title, and other factors. The user will be able to find the citation for a known article or identify articles on a subject, by a particular author, etc.

Getting the article

When the user has identified the articles s/he needs, Seymour will display several options for retrieval, including different delivery options, some with fees. Delivery methods will include interlibrary loan among Maryland libraries, downloading the article to a local computer or fax machine, and ordering a photocopy from a commercial supplier.

The interlibrary loan request for an article will be handled online through Seymour. The system will locate libraries that hold the needed periodical volume and will send the request sequentially to the potential lending libraries according to the borrowing library's preferred path. Seymour will track the request, providing status at any point and keeping appropriate statistics. The article could be downloaded from a full text file, send in paper through the mail or delivery system, or faxed. There might be fees involved, such as a per page cost for photocopying.

If the article is not available from a Maryland library, or if the user needs it more quickly than a routine interlibrary loan transaction will take, there will

be an option for ordering a photocopy through a supplier like UnCover, Ariel or UMI. The user would pay for the article with a credit card and the cost would include the photocopy, delivery and copyright royalty fees. These transactions can also be handled by Seymour.

TARGET GROUPS: Initial implementation will focus on current MILNET users, libraries with local automated systems that interface with Seymour, and libraries with basic dial access capability. As libraries acquire at least dial access capability, they will can use this Seymour service.

YEARS: Implementation will begin in FY 1994, following the necessary procurement process. During FY 1995 - FY 1997, the Find an Article software will assume more responsibility for managing the transactions by integrating the various processes and simplifying the steps required of the user.

COSTS: No costs are available now. An RFI will address this question in Fall, 1992.

NOTES: The local library will meet immediate needs for basis indexes and journals. Seymour will augment the local library's services.

"Instant gratification" of the user's needs is the goal in Find an Article.

A number of issues need to be resolved in Find an Article: Who will coordinate and pay for the licensing agreements for indexes and full text? Which indexes and full text files will be mounted on Seymour, and who will select them? For the interlibrary loan of articles, what policies and procedures will be followed? Who will determine fees for interlibrary loan photocopies, and will they be paid by the local library or the user who requests them?

EDUCATION/ TRAINING: Education of library staff is needed to make them aware of the possibilities of Find an Article, including the various delivery options, and how it supplements their local periodical services.

Training will provide library staff with the skills needed to search Seymour, initiate and track an interlibrary loan request, and options for delivery, including commercial systems. This training can be handled by the regional library resource centers, State Library Resource Center and other key sites.

Project FIND A FACT

PURPOSE: To enable library staff and users to find answers to specific questions or retrieve information on a particular topic.

STRATEGY: At the first state of development, Seymour will offer users a variety of electronic reference sources to search, such as an encyclopedia, almanac, quotation book, dictionary, ZIP code directory, phone directories and census information. Searches will depend on the searching procedures for each resource.

At the second stage of development, Seymour will travel through all the databases on the system to retrieve the information. We envision using an artificial intelligence agents (know-bots, or in Seymour's language, **Fetch!**) that will search the available files on behalf of the user. This kind of search would be transparent to the user, with the response delivered in a convenient and comprehensible manner.

An online HELP capability will also be available in Find a Fact. The user can contact a reference librarian through the system and receive assistance with how to use the system or to get additional help if their question was not answered.

TARGET GROUPS: Initial implementation will focus on libraries with dial access capability, those with local automated systems that can interface with Seymour, and MILNET users. Ultimately, this will be a very useful service for end users, Maryland residents who dial into Seymour from home, office or school.

YEARS: Stage one will begin in FY 1994, following the necessary procurement process. In stage two, the more sophisticated aspects of Find a Fact will be developed, which will require FY 1995-98.

COSTS: No costs are available now. An RFI will address this question in Fall, 1992.

NOTES: There are many questions that need to be answered before setting up Find a Fact. What databases will be used with the first stage? What databases are available? Are there databases that need to be developed? Who will make the collection development decisions? What database licensing fees will be involved and how will the licensing issue be handled? How will it be coordinated and governed? Will Find a Fact be located at one site in the

state or will its databases be located at various sites?

EDUCATION/ TRAINING: Library staff and ultimately end users will need to be made aware of this service and what it has to offer. Basic training in the skills needed to effectively use the service should be offered to library staff as Find a Fact becomes available, with updates as the software is enhanced and/or more databases are added. Specialized training will be needed for the library staff who provide online help in this service.

Project FIND A HELPING AGENCY

PURPOSE: To enable Maryland residents to identify, locate and get directory information about agencies that provide the services they need. The agencies include public and private ones from statewide to local levels. Seymour has the potential to become the primary information and referral (I&R) resource for Maryland.

STRATEGY: Access via Seymour will be developed in the following stages, which parallel those for providing access to bibliographic records of library holdings.

1. Libraries will be encouraged to create or update their information and referral (I&R) files using the new MARC format and the state's standardized taxonomy (for subject headings). This will be especially important for the portions of the state not represented in files.

2. Libraries with machine-readable information and referral (I&R) databases will be encouraged to make them available via their local online system or other access so that libraries can dial in to search the databases. Some public libraries maintain separate I&R files online (Montgomery County), while others have integrated the records into their bibliographic files (Enoch Pratt, Anne Arundel). These different approaches will need to be accommodated as access is developed.

   Agencies like First Call for Help in Baltimore will be encouraged to become involved in efforts to provide access to files beyond what the library community has developed.

3. Seymour's Find a Helping Agency service will create a "virtual" statewide I&R file, comprised of all available files around the state. A user's search will cover all files and present search results in a logical format. For example, a search on American Red Cross will yield citations for Red Cross offices at all levels, with follow-up prompts to the user to direct the search to the appropriate information to meet his/her need. A user could also qualify a search query with the location and identifying information as known.

4. Seymour will connect with other I&R and directory databases, such as the National Library of Medicine's DIRLINE, providing access to information beyond Maryland or the scope of what Maryland libraries offer.

TARGET GROUPS: Public libraries with current or developing I&R files are the first group that will be involved in developing this service.

Individual public libraries or regions of the state which lack I&R files will be encouraged to create and make them available in the second phase.

I&R providers, like Baltimore's First Call for Help, should be involved in early planning and share, as appropriate, in its development. As Seymour grows in coverage and ease of access, it needs to be made available to I&R providers through awareness and skills training.

There are potential users, like school counselors, who need to be made aware of this service. Their suggestions about its development are needed, and they may be a source of information and data that need to be included in it.

YEARS: FY 1993: Initial development of MARC format I&R files is underway in several counties, including Harford and Howard. Public libraries need to be made aware of MARC format, the standard taxonomy, and the potential Seymour offers. The Eastern Shore Regional Library is involved in planning for the potential virtual statewide database.

FY 1994: Additional existing machine-readable files in public libraries can be made available through local online systems or by providing dial access ports to the server which houses a file. Planning for Seymour's Find a Helping Agency service begins.

FY 1995: Find a Helping Agency is inaugurated, with at least dial access via dial access from a single Seymour menu screen. Seymour's development as a "virtual" I&R database continues. Connection with other I&R and directory databases is initiated.

FY 1996: Seymour offers a "virtual" I&R database which leads the user through appropriate questions to information covering agencies statewide and local to each county of the state. Find a Helping Agency is used by people in libraries, at home, in social service agencies, schools and other places where this information is needed.

COSTS: Costs will include development of I&R files by libraries as well as Seymour developments.

Seymour's development costs are unknown at this time. This is an

important question for the proposed Request for Information (RFI).

EDUCATION/ TRAINING: Education will be needed to make librarians and others aware of:

- the MARC format for information and referral records
- the usefulness of enabling online access to their I&R databases
- availability of Seymour's Find a Helping Agency and what it can do

Training will be needed for library staff, I&R providers and other users:

- to enable them to dial into available I&R files
- to create I&R records in the MARC format
- to help in the ongoing maintenance of files

NOTES:

1. I&R files are expensive to create and especially to maintain, since they must be constantly updated in order to provide useful information. It is a staff-intensive process.

2. There are a number of existing I&R databases serving the Baltimore metropolitan area. Seymour offers an opportunity for the database holders to meld their efforts and their files into one virtual file that will serve the region and be related intelligently to those in other parts of the state.

3. The stakeholders need to buy into Seymour early in the process, and there need to be incentives for them to adopt the MARC format, the standard thesaurus, and to develop files cooperatively where appropriate. This includes adopting and implementing standards for the content and variety of I&R records.

4. As freenets develop, I&R databases and services could become an integral part of the freenet offerings. Coordination of these developments will be important if we are to provide optimal service to Maryland residents.

NATIONAL STANDARDS:

- MARC Format for community information files
- Z39.50 for computer interfacing
- Z39.58 Common Command Language

Project ADD AND ACCESS A DATABASE

PURPOSE: To increase the access of Maryland librarians and library users to information stored in electronic format in Maryland state and local government agencies, nonprofit corporations, and business organizations. This will enable libraries and individuals to locate in a convenient and economical way significant information about this state.

STRATEGY: One of the Seymour functions will be to negotiate and facilitate the connection of many databases now existing in Maryland to the Internet/NREN telecommunication system. Thnis would provide quick, cheap, ubiquitous access to Maryland based data systems, primarily for Maryland residents, but also for the benefit of other users of the Internet/NREN system throughout the nation and the world.

Among the targets for early inclusion in the system would be the Maryland Information Retrieval System (MIRS), a database of such important state documents as the Code of Maryland (COMAR), current data on actions of the Maryland General Assembly, etc. Other potential databases include the job and career databases maintained Maryland's Department of Economic and Employment Development, and various databases maintained by the Maryland State Archives.

There are other state government databases that could be added later, and a policy on state information should be development and implemented to facilitate this process. Such a policy would outline the conditions under which residents of the state would be entitled to access information created with their tax dollars.

Building on these bases, there are many other possible databases that can be made available, from local government, nonprofit corporations and private organizations. Some agencies will have databases that can be accessed by Seymour, or the databases could be loaded at a Seymour site. To facilitate the development of databases that would be useful to users, a software platform will be selected and made available, enabling agencies to load their records on a platform that Seymour's users can readily access.

TARGET GROUPS: This project targets all the residents of Maryland who need information about their state. It would be particularly useful for people exercising their political and citizenship rights and responsibilities, for students at all levels of education, for business people needing information for informed business decisions, and for researchers needing data on Maryland.

YEARS:

FY 1993:
- . begin process of locating suitable databases and negotiating for their inclusion
- . identify software platform to be used by agencies that want to create or transfer their files to an accessible format, available through Seymour

FY 1994:
- . add first Maryland databases to Seymour after working out search and access issues
- . work with agencies to create and maintain their files in Seymour on the designated software platform

FY 1995:
- . secure appointment of a state Commission on Information Policy
- . continue to work with agencies to facilitate their loading and making accessible their local files

FY 1996:
- . passage of legislation establishing an Information Policy for Maryland

FY 1997:
- . implement policy by securing access to all suitable Maryland government databases through Seymour

FY 1998:
- . intensive marketing of the availability of this data

FY 1999:
- . expand access to local government databases, nonprofits and businesses

COSTS: Since the earliest targeted databases are government-ownmed, the costs will be primarily for Internet connectins, software programs and some hardware such as ports for the host computers. The software platform for development of databases will be another cost, plus computer storage. Costs may become more significant as additional large databases are added.

NATIONAL STANDARDS:
- . MARC formats as appropriate for bibliographic and other records
- . Z39.50 for computer interfacing
- . Z39.58 Computer Command Language

A SEYMOUR GLOSSARY OF TERMS AND ACRONYMS

backbone	the main support system for telecommunications. Maryland libraries will be able to connect through a local phone call or from their local automated systems to this telecommunication system.
brokering libraries	libraries that serve as an intermediary to other libraries in filling interlibrary loan requests for materials and information. In Maryland, the regional library resource centers and the State Library Resource Center are brokers
CD-ROM	Compact disk - read only memory, a way of storing and providing access to electronic databases, like indexes of periodicals.
dial access	using a microcomputer, modem, telecommunication software and connection to a telephone line, the user can connect electronically with databases outside the library or home.
DLDS	Division of Library Development and Services, an agency of the Maryland State Dept. of Education. It has responsibilities for development of public libraries and school library media programs and the Maryland State Library Network.
electronic mail	sending and receiving messages through a system of electronic mail boxes. Participants can send messages to one, many or selected groups of users in the system. It can be used instead of phone or paper message systems.
fax	(short for *telefacsimile*) the electronic transmission of words and/or images. Example: sending fax of a periodical article or a letter. Used when speed is a factor.
freenet	a public, community computer system that provides access to specific information and to bulletin board and/or electronic mail systems. Used by people (at home, work, school or the library) to seek information or to share ideas, information, and suggestions to others using the system
I&R	information and referral, the providing of information about agencies that provide services, such as social service agencies
ILL	interlibrary loan, the process of lending and borrowing materials among libraries

infrastructure	an underlying foundation that holds pieces together
Internet	nation's "network of networks" that connects universities, research centers and other public agencies in order to share data. NREN will develop from Internet.
local online system	computer-based system that supports local library operations, such as circulation, catalog, and technical services.
LSCA	Library Services and Construction Act, federal funds available for public library and library networking projects. Administered by the Division of Library Development and Services
MAILLS	Maryland Interlibrary Loan Librarians, an association of library staff involved in ILL activities
MAILS	the first name created for Seymour, initially cited in the "Vision Statement" issued by the Network Coordinating Council
MARC format(s)	**MA**chine **R**eadable **C**ataloging, formats to identify the particular parts of a bibliographic (cataloging) or other kind of record in order to manage the information in a computer system
MICROCAT	Maryland's statewide union catalog of library materials, excluding serials. Available in microfiche, CD-ROM, and online in MILNET.
MILNET	online version of the state's online union database, including MICROCAT and ULPM. The MICROCAT/ULPM products are produced from MILNET. At least 12 libraries use MILNET to handle their interlibrary loan transactions, and a new "search only" service is available to dial access users.
MILO	Maryland Interlibrary Organization, the department in the State Library Resource Center that brokers interlibrary loan requests from around the state and to libraries beyond Maryland
NCC	Network Coordinating Council, the group that coordinates planning and development of the Maryland State Library Network
NREN	National Research and Education Network, the nationwide telecommunication network being developed by the federal government to support high speed computing

OCLC	a computer system built on the bibliographic (cataloging) records of libraries in the US and many other countries, used by its members for cataloging library materials, handling interlibrary loan transactions and related electronic information activities
ProQuest	a commercial index and full text database covering periodicals and journals; produced by UMI (University Microfilms International)
RLRC	regional library resource center. Maryland has three RLRC's in Western, Southern and Eastern Maryland, serving as brokers for services to rural libraries
Seymour	Name given to the plan to connect Maryland libraries electronically. It is not an acronym.
SLRC	State Library Resource Center (Enoch Pratt Free Library), state-funded services to support interlibrary loan and other resource sharing in Maryland
transparent	as in "transparent to the user": something that is clearly or readily understandable to the user, though the behind-the-scenes effort may be complex
ULPM	Union List of Periodicals in Maryland, which lists the journal holdings of contributing libraries. Used to find out which library has which volumes of any given periodical. Currently it is available in microfiche and online in MILNET.
UMCP	University of Maryland, College Park, part of the UM System
UM System	the University of Maryland System, comprised of 13 of the University of Maryland and state university campuses
UnCover	a database that indexes and provides photocopies of articles via the CARL library system.
virtual	something that exists in essence but not in actual form, fact or name
Z39.50	a national standard that supports computer-to-computer connection in order for search queries to be made on databases like library online catalogs. Formal title: Information Retrieval Service Definition and Protocol Specifications for Library Applications"